EXHIBIT J

Bloomberg

BVAL DERIVATIVES

BRIEF INTRODUCTION TO GOLDEN COPY DATA SOURCE

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Bloomberg Valuation Service provides independent and transparent pricing of OTC derivatives across all asset classes. One of the key advantages BVAL provides to its clients is access to enhanced quality data sources with unparalleled transparency, called "Golden Copy" market data, designed to ensure precise and up-to-date valuations of positions.

BGN Data

The primary source of Golden Copy market data is the BGN data, which is a real time consensus estimate of the current traded level market data from various contributors, such as electronic trading platforms, exchanges, banks, broker/dealers, and contractual message scrape agreements that capture additional exclusive institutional content. Rigorous data cleansing and validation algorithms are applied to the market data gathered before and after surfaces and curves construction. The following is a high level description of the BGN data generation process:

- Data Aggregation: The first step is to find all contributors with the most recently quoted bid and ask prices within a preset time window. While there is no limitation on the number of contributors to be included, at least three contributors are required to establish a valid BGN quote. Data quality control algorithms are used to ensure that contributor data sets are consistent and complete. For example, each contributor is assigned a quality score based on numerous factors including update frequency and spike frequency. The algorithm then uses this information to generate more accurate quotes. The below image shows an example of such scores applied to spreads for the tenors of a CDS Curve:

Tenor	Ticker	Mid	Score	Mid	Score	Mid	Score	Mid	Score	Mid	Score	Mid
6m.	CT679414	5.147	0.791	--	--	--	--	5.09	0.706	5.183	0.289	--
1y.	CIBM1U1	5.537	0.841	--	--	7.00	0.00	6.805	0.789	5.34	0.245	--
2y.	CIBM1U2	10.288	0.852	--	--	10.00	0.10	9.96	0.787	10.429	0.229	--
3y.	CIBM1U3	17.738	0.892	--	--	17.00	0.321	16.91	0.803	20.532	0.19	--
4y.	CT385852	29.708	0.909	--	--	29.00	0.422	28.945	0.807	32.738	0.189	--
5y.	CIBM1U5	40.918	0.929	40.50	0.068	40.50	0.407	40.305	0.782	42.854	0.26	41.50
7y.	CIBM1U7	63.051	0.906	--	--	65.00	0.382	64.75	0.81	58.314	0.204	--
10y.	CIBM1U10	75.693	0.837	--	--	--	--	75.995	0.763	75.549	0.312	--
15y.	CT679426	89.899	0.837	--	--	--	--	89.31	0.763	90.599	0.312	--
20y.	CT679430	96.778	0.837	--	--	--	--	95.655	0.763	97.902	0.312	--
30y.	CT679434	102.988	0.818	--	--	--	--	101.535	0.763	104.841	0.23	--

- Data Sanity Check/spike filtering: Data checks are put in place to detect any incorrect contributor data. For example, a decimal place filter is used to determine how many decimals are allowed to change from tick to tick. Any quotes that violate such sanity check are discarded. In addition, contributed volatility surfaces (for FX, IR, Equities, etc) and curves (for IR, spread, credit, etc) with similar conventions as well as the current BGN surface/curve (if available) are used as references for spike filtering. When sample size is large enough, mean and standard deviation are calculated for quotes at all available data points. Data received are checked against the mean and standard deviation and are deemed invalid if they are more than a preset number of standard deviations away from the mean. The picture below shows an example of spike detection on the volatility surfaces of a few equity indices:

Underlying	Set	Spikes	Points	Spikes %	Trading Date	Creation Datetime
					dd-Mon-yyyy	
1. AS51 Index	P0: Index	4	364	1.10	05/24/2017	05/24/2017 01:15:00
2. CAC Index	P0: Index	14	364	3.85	05/24/2017	05/24/2017 11:15:00
3. DAX Index	P0: Index	3	364	.82	05/24/2017	05/24/2017 11:15:00
4. HSCEI Index	P0: Index	6	364	1.65	05/24/2017	05/24/2017 04:15:00
5. HSI Index	P0: Index	14	364	3.85	05/24/2017	05/24/2017 04:15:00
6. ISA Index	P2: Index	2	14	14.29	05/24/2017	05/24/2017 15:30:00
7. LCXE Index	P2: Index	2	14	14.29	05/24/2017	05/24/2017 11:15:00
8. NIFTY Index	P0: Index	12	364	3.30	05/24/2017	05/24/2017 05:45:00
9. NKY Index	P0: Index	2	364	.55	05/24/2017	05/24/2017 02:00:00
10. OMX Index	P0: Index	18	364	4.95	05/24/2017	05/24/2017 11:10:00

- Surface/Curve Smoothing: After a series of data checks and interpolations, the next step is to construct a model surface/curve for each contributed surface/curve. The idea is to generate a smooth and reasonable shape, both in the interpolated and extrapolated regions, while taking into the consideration the actual contributor level. The key factor for this approach is the strict market demand that the model surface be fairly smooth without any model driven spikes due to interpolations. Various algorithms, such as least square algorithm, are employed to fulfill this objective. A sample methodology used to fit the FX volatility surface is discussed in a later section.

- Re-Sanity Check: In case of volatility surfaces, the model data points are checked again for variance decrease arbitrage and implied probability density arbitrage. ATM volatility points are checked to ensure $\sigma^2 t$ is in increasing order. Anytime this condition is violated for a pair of maturities, quotes for both maturities are invalidated. Implied probability distribution derived from options at each maturity must have positive value, or arbitrage condition exists. Therefore, such condition is checked for all quotes at each maturity. If any arbitrage condition appears, the resultant data point is corrected in a proper way. The smile shapes at all maturities are also checked. Any existing kinks are removed or modified. If a kink is caused by contributed points and has a noticeable concave shape, the quotes are modified to remove the concaveness.

- Final Surface/Curve Construction: Finally, the BGN mid data surface/curve is constructed as a weighted average of the completed contributor surfaces/curves. For each contributor surface/curve, the weight for the whole surface/curve exponentially decays to zero as the contributor surface/curve ages, and as the metric between the contributed surface/curve and a rough average surface/curve increases. A quality weight is calculated based a few key factors, such as the amount of time since the contributor has updated their most recent quotes, the completeness of the data the contributor sent, and estimates of the quality of the contributor's surface/curve. Up to a preset number, contributors with highest quality weight are retained and the median of their mid prices is calculated and serves as the mid estimate. The smallest spread among the retained contributors serves as the spread estimate, and is used to produce ask or bid price from the mid estimate.

- BGN Swap Rates

    BGN bid and ask quotes are based on mid and smoothed spread. Mid is the median mid price of all sources in the past 5 minutes. Heuristic smoother similar to exponential moving average is used to smooth out spreads. No output is generated if either bid or

ask is missing, or if bid and ask has a time difference of more than 30 seconds from the same source.

- FX Volatility Surfaces

BGN FX implied volatility quotes are contributed by dozens of major banks and brokers. The mid volatility surfaces are calculated as a weighted average of contributor quotes and interpolated contributor quotes. Volatilities are contributed as at-the-money (ATM), risk reversal (RR), and butterfly (BF) quotes. The current implementation targets a quadratic functional form, in delta-like coordinate. At a maturity containing contributed quotes, this functional form is given by the error correction function designed to exactly match input volatility quotes. By calculating the differences between the market quoted volatilities and the fit of the quadratic component, we get a set of residual values which this function is designed to interpolate. This interpolation of this function is either linear or a cubic spline (for more sophisticated local volatility or stochastic local volatility models). Beyond the highest and lowest market quoted strikes, the function is set to zero.

Additional Contributor Data

In addition to BGN data, Golden Copy market data also incorporates contributor quotes that are not available to Bloomberg terminal users. Such contributors could include dealers or banks that provide data exclusively for Bloomberg Valuation Services, in order to enhance and complement BGN data as needed, such as areas where BGN does not have sufficient quotes due to illiquid nature of certain market data.
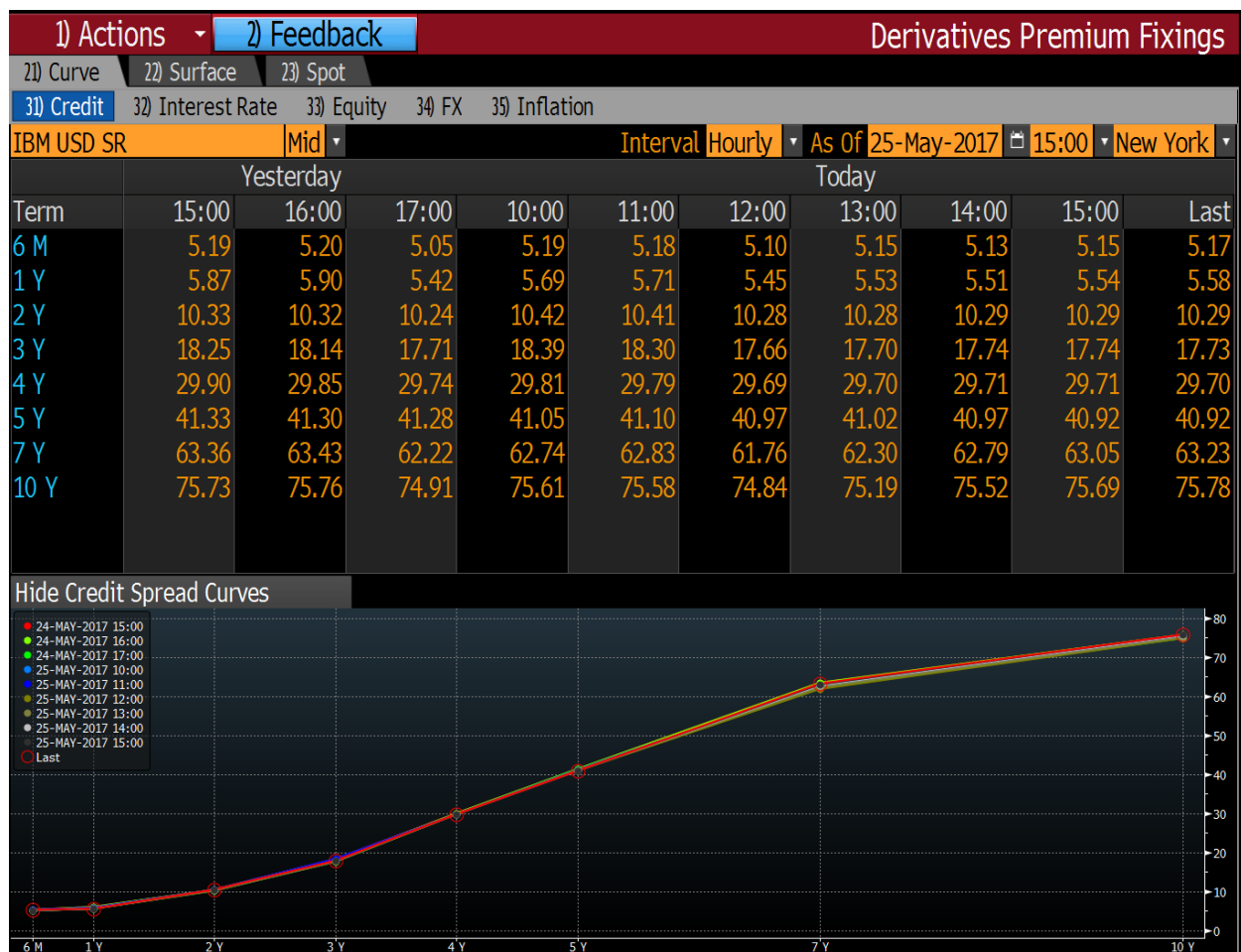
For quotes obtained directly from contributors for BVAL, a separate process of data filtering and weighting is established by BVAL financial engineers to ensure the highest quality and accuracy.

Data is first filtered using a series of techniques such as identifying live contributors, detecting outliers, testing quote staleness, and removing duplicate quotes. Live contributors are identified by the BVAL financial engineers based on their experiences. Sophisticated statistical techniques are then used to filter the data, such as trumping method when subgroups of quotes disagree with each other. Various algorithms are then applied to data based on asset classes.

Data Monitoring

The resulting datasets generated from above processes go through another round of data monitoring and spike detection daily by dedicated BVAL financial engineers immediately post generation.
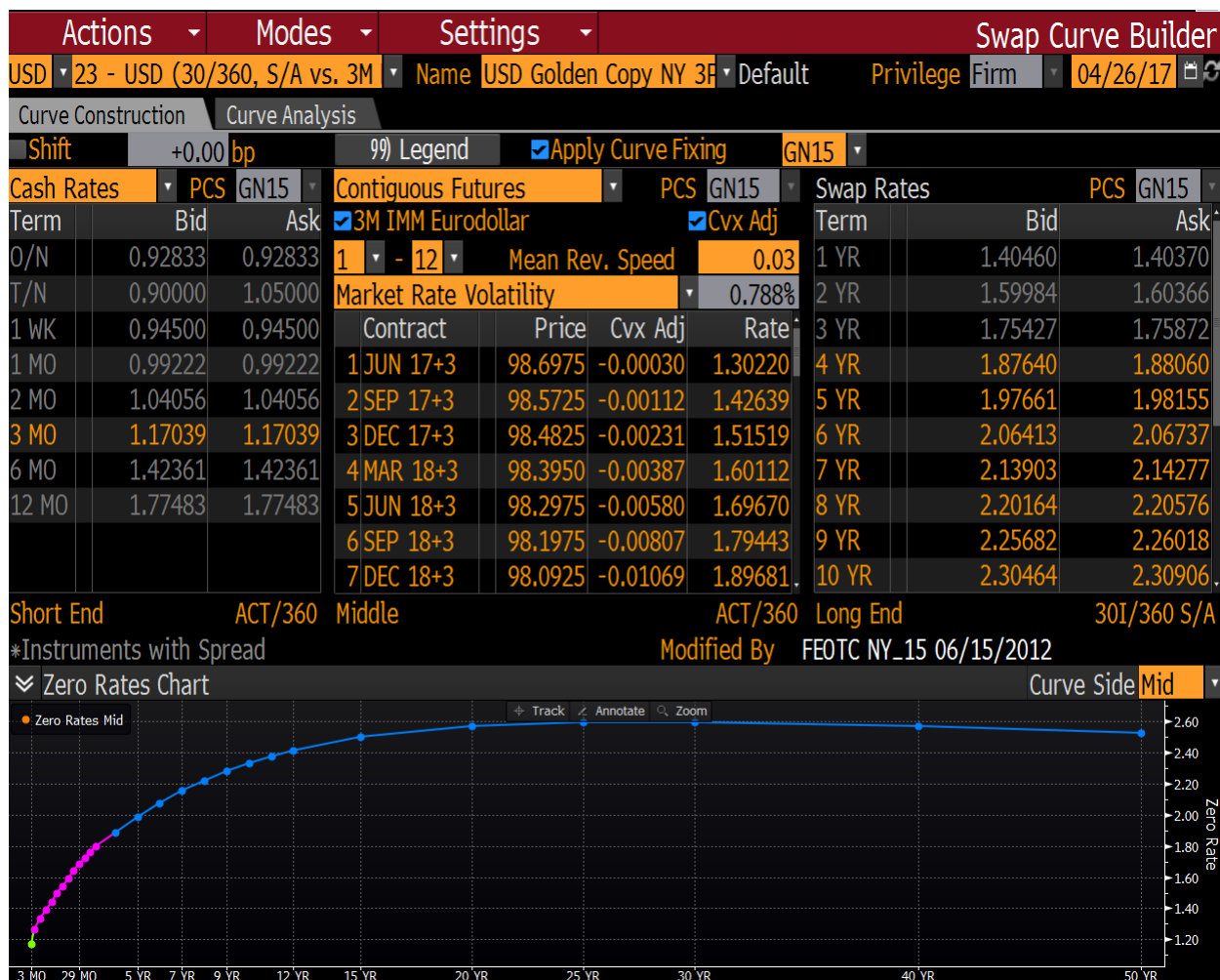
Sophisticated spike detection algorithms are put in place to identify any larger than normal day to day jumps for Golden Copy market data. For each market data set, rigorous data analysis is conducted by BVAL financial engineers to determine a daily movement range that is considered reasonable, based on historical standard deviation and/or bid ask spread. Any price movement that falls outside of such range is alerted as a potential spike and is then checked carefully by BVAL financial engineers against the contributor sources and relevant market conditions. Any data that is found to be inconsistent is immediately repaired and replaced to ensure only the optimal set of market data is used in pricing. The picture below shows a sample CDS Curve in the DFIX Function, where hourly snapshots can be monitored:

1) Actions   2) Feedback   Derivatives Premium Fixings

21) Curve   22) Surface   23) Spot

31) Credit   32) Interest Rate   33) Equity   34) FX   35) Inflation

IBM USD SR   Mid   Interval Hourly   As Of 25-May-2017   15:00   New York

| | Yesterday | | | Today | | | | | | |
Term	15:00	16:00	17:00	10:00	11:00	12:00	13:00	14:00	15:00	Last
6 M	5.19	5.20	5.05	5.19	5.18	5.10	5.15	5.13	5.15	5.17
1 Y	5.87	5.90	5.42	5.69	5.71	5.45	5.53	5.51	5.54	5.58
2 Y	10.33	10.32	10.24	10.42	10.41	10.28	10.28	10.29	10.29	10.29
3 Y	18.25	18.14	17.71	18.39	18.30	17.66	17.70	17.74	17.74	17.73
4 Y	29.90	29.85	29.74	29.81	29.79	29.69	29.70	29.71	29.71	29.70
5 Y	41.33	41.30	41.28	41.05	41.10	40.97	41.02	40.97	40.92	40.92
7 Y	63.36	63.43	62.22	62.74	62.83	61.76	62.30	62.79	63.05	63.23
10 Y	75.73	75.76	74.91	75.61	75.58	74.84	75.19	75.52	75.69	75.78

Hide Credit Spread Curves

- 24-MAY-2017 15:00
- 24-MAY-2017 16:00
- 24-MAY-2017 17:00
- 25-MAY-2017 10:00
- 25-MAY-2017 11:00
- 25-MAY-2017 12:00
- 25-MAY-2017 13:00
- 25-MAY-2017 14:00
- 25-MAY-2017 15:00
- Last

Snapshot

One of the most important features of Golden Copy market data is that snapshots of the data are taken at specific times during the day for different time zones worldwide. Therefore, any historical

Golden Copy market data used in pricing is accessible in Bloomberg Derivatives Valuation Portfolio (BVPM) by right clicking on a deal and choosing the corresponding curves or surfaces, or via terminal calculators as a pricing source by BVAL clients. It can also be available via excel download to registered BVAL clients. The picture below shows a sample USD golden copy curve viewable by BVAL clients.

Actions ▾	Modes ▾	Settings ▾	Swap Curve Builder

USD ▾ 23 - USD (30/360, S/A vs. 3M ▾   Name USD Golden Copy NY 3F ▾ Default   Privilege Firm ▾   04/26/17

Curve Construction | Curve Analysis

☐ Shift   +0.00 bp   99) Legend   ☑ Apply Curve Fixing   GN15 ▾

Cash Rates ▾   PCS GN15 ▾

Term	Bid	Ask
O/N	0.92833	0.92833
T/N	0.90000	1.05000
1 WK	0.94500	0.94500
1 MO	0.99222	0.99222
2 MO	1.04056	1.04056
3 MO	1.17039	1.17039
6 MO	1.42361	1.42361
12 MO	1.77483	1.77483

Contiguous Futures ▾   PCS GN15 ▾

☑ 3M IMM Eurodollar   ☑ Cvx Adj
1 ▾ - 12 ▾   Mean Rev. Speed   0.03
Market Rate Volatility ▾   0.788%

	Contract	Price	Cvx Adj	Rate
1	JUN 17+3	98.6975	-0.00030	1.30220
2	SEP 17+3	98.5725	-0.00112	1.42639
3	DEC 17+3	98.4825	-0.00231	1.51519
4	MAR 18+3	98.3950	-0.00387	1.60112
5	JUN 18+3	98.2975	-0.00580	1.69670
6	SEP 18+3	98.1975	-0.00807	1.79443
7	DEC 18+3	98.0925	-0.01069	1.89681

Swap Rates   PCS GN15 ▾

Term	Bid	Ask
1 YR	1.40460	1.40370
2 YR	1.59984	1.60366
3 YR	1.75427	1.75872
4 YR	1.87640	1.88060
5 YR	1.97661	1.98155
6 YR	2.06413	2.06737
7 YR	2.13903	2.14277
8 YR	2.20164	2.20576
9 YR	2.25682	2.26018
10 YR	2.30464	2.30906

Short End   ACT/360   Middle   ACT/360   Long End   30I/360 S/A

*Instruments with Spread   Modified By   FEOTC NY_15 06/15/2012

⌄ Zero Rates Chart   Curve Side Mid ▾

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